

Replacement Sheet  
Serial No. 10/597,373  
Inventor: M. Edward Medof

3121	actacagggc	accgactcat	tggctactca	tctgctgaat	gtatcctctc	aggcaatact
3181	gcccatgtga	gcaogaagcc	gccaatttgt	caacgaattc	cttggtgggt	acccccaaac
3241	atcgccaatg	gagatttcoat	tagcaccaac	agagagaatt	ttcactatgg	atcagtggtg
3301	acctaccgct	gcaatcttgg	aagcagaggg	agaaaggtgt	ttgagcttgt	gggtgagccc
3361	tccatatact	gcaccagcaa	tgacgatcaa	gtgggcatct	ggagcggccc	cgccccctcag
3421	tgcattatac	ctaacaaatg	cacgcctcca	aatgtggaaa	atggaatatt	ggtatctgac
3481	aacagaagct	tatttttcctt	aaatgaagtt	gtggagttta	ggtgtcagcc	tggctttgtc
3541	atgaaaggac	cccgcctgtg	gaagtgccag	gccctgaaca	aatgggagcc	agagttacca
3601	agctgctcca	gggtgtgtca	gccgcctcca	gaaatcctgc	atgggtgagca	taccccaagc
3661	catcaggaca	acttttcacc	tgggcaggaa	gtgttctaca	gctgtgagcc	tggctatgac
3721	ctcagagggg	ctgcgtctct	gcactgcaca	ccccagggag	actggagccc	tgaagccccg
3781	agatgtgcag	tgaatcctg	tgatgacttc	ttgggtcaac	tcctcatgg	ccgtgtgcta
3841	tttccactta	atctccagct	tggggcaaa	gtgtcctttg	tctgtgatga	agggtttcgc
3901	ttaaagggca	gttcggttag	tcattgtgtc	ttggttgga	tgagaagcct	ttggaataac
3961	agtgttctgt	tgtgtgaaca	tatcttttgt	ccaaatcctc	cagctatcct	taatgggaga
4021	cacacaggaa	ctccctctgg	agatattccc	tatggaaaag	aaatatctta	cacatgtgac
4081	ccccaccag	acagagggat	gaccttcaac	ctcattgggg	agagcaccat	ccgctgcaca
4141	agtgaccctc	atgggaatgg	ggtttgagac	agccctgccc	ctcgtgtgta	actttctgtt
4201	cgtgctggtc	actgtaaaac	cccagagcag	tttccatttg	ccagtccctac	gatcccaatt
4261	aatgactttg	agtttccagt	cgggacatct	ttgaattatg	aatgocgtcc	tgggtathtt
4321	gggaaaatgt	tctctatctc	ctgcctagaa	aacttgggtc	ggtcaagtgt	tgaagacaac
4381	tgtagacgaa	aatcatgtgg	acctccacca	gaacccttca	atggaatggt	gcatataaac
4441	acagatacac	agtttggtatc	aacagttaat	tattcttgta	atgaagggtt	tcgactcatt
4501	ggttccccat	ctactacttg	tctcgtctca	ggcaataatg	tcacatggga	taagaaggca
4561	cctattttgtg	agatcatatc	ttgtgagcca	cctccaacca	tatccaatgg	agacttctac
4621	agcaacaata	gaacatcttt	tcacaatgga	acggtggtaa	cttaccagtgt	ccacactgga
4681	ccagatggag	aacagctggt	tgagcttgtg	ggagaacggg	caatatattg	caccagcaaa
4741	gatgatcaag	ttggtgtttg	gagcagccct	ccccctcggg	gtattttctac	taataaatgc
4801	acagctccag	aagttgaaaa	tgcaattaga	gtaccaggaa	acaggagtgt	cttttccctc
4861	actgagatca	tcagatttag	atgtcagccc	gggtttgtca	tggtaggggc	ccacactgtg
4921	cagtgccaga	ccaatggcag	atgggggccc	aagctgccac	actgctccag	ggtgtgtcag
4981	ccgcctccag	aaatcctgca	tgggtgagcat	accctaagcc	atcaggacaa	cttttcacct
5041	gggcaggaag	tgttctacag	ctgtgagccc	agctatgacc	tcagaggggc	tgcgtctctg
5101	cactgcacgc	cccagggaga	ctggagccct	gaagccccta	gatgtacagt	gaaatcctgt
5161	gatgacttcc	tgggccaact	ccctcatggc	cgtgtgctac	ttccacttaa	tctccagctt
5221	ggggcaaagg	tgtcctttgt	ttgcgatgaa	gggttccgat	taaaaggcag	gtctgctagt
5281	cattgtgtct	tggctggaat	gaaagccctt	tggaaatagca	gtgttccagt	gtgtgaacaa
5341	atcttttgtc	caaatcctcc	agctatcctt	aatgggagac	acacaggaac	tccctttgga
5401	gatatctcct	atggaaaaga	aatatcttac	gcatgcgaca	cccaccagaa	cagagggatg
5461	accttcaacc	tcattgggga	gagctccatc	cgctgcacaa	gtgacctca	agggaaatggg
5521	gtttggagca	gccctgcccc	tcgctgtgaa	ctttctgttc	ctgctgcctg	cccacatcca
5581	cccaagatcc	aaaacgggca	ttacattgga	ggacaacgtat	ctctatatct	tcctgggatg
5641	acaatcagct	acacttgtga	ccccggctac	ctgttagtgg	gaaagggcct	cattttctgt
5701	acagaccagg	gaatctggag	ccaattggat	cattattgca	agaagtaaa	ttgtagcttc
5761	ccactgttta	tgaatggaat	ctcgaaggag	ttagaaatga	aaaaagtata	tcactatgga
5821	gattatgtga	ctttgaagtg	tgaagatggg	tatactctgg	aaggcagtc	ctggagccag
5881	tgccaggcgg	atgacagatg	ggaccctcct	ctggccaaat	gtacctctcg	tgcacatgat
5941	gctctcatag	ttggcacttt	atctggtacg	atcttcttta	ttttaactcat	cattttcctc
6001	tcttgataaa	ttctaaggca	cagaaaaggc	aataatgcac	atgaaaaccc	taaagaagtg
6061	gctatccatt	tacattctca	aggaggcagc	agcgttcatc	cccgaactct	gcaaacaat
6121	gaagaaaata	gcagggtcct	tccttgacaa	agtactatac	agctgaagaa	catctcgaat
6181	acaatttttg	tgggaaagga	gccaattgat	ttcaacagaa	tcagatctga	gcttcataaa
6241	gtctttgaag	tgacttcaca	gagacgcaga	catgtgcact	tgaagatgct	gccccctccc
6301	tggtacctag	caaagctcct	gcctctttgt	gtgcgtcact	gtgaaacccc	cacccttctg
6361	cctcgtgcta	aacgcacaca	gtatctagtc	aggggaaaaag	actgcattta	ggagatagaa
6421	aatagtttgg	attacttaaa	ggaataaggt	gttgcttgga	atttctgggt	tgtgaaggtg

Fig. 3 (Cont.)

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6481 tcactgttct tttttaaaat atttgtaata tggaaatgggc tcagtaagaa gagcttggaa  
6541 aatgcagaaa gttatgaaaa ataagtcact tataattatg ctacctactg ataaccactc  
6601 ctaatatattt gattcatttt ctgcctatct tctttcacat atgtgttttt ttacatacgt  
6661 acttttcccc ccttagtttg tttcctttta ttttatagag cagaacccta gtctttttaa  
6721 cagtttagag tgaaatatat gctatatcag tttttacttt ctctagggag aaaaattaat  
6781 ttactagaaa ggcatgaaat gatcatggga agagtgggta agactactga agagaaatat  
6841 ttggaaaata agatttcgat atcttctttt tttttgagat ggagtctggc tctgtctccc  
6901 aggctggagt gcagtggcgt aatctcggct cactgcaacg tccgcctccc g

Fig. 3 (Cont.)

Fig. 4A

SEQ. ID NO:5

MEPPGRRECPFPSWRFPGLLLAAMVLLLYSFSACEEPPTFEAMELIGKP 50  
KPYYEIGERVDYKCKKGYFYIPPLATHITICDRNHTWLPVSDDACYRETCP 100  
YIRDPLNGQAVPANGTYEFGYQMHFICNEGYYLIGEEILYCELKGSVAIW 150  
SGKPPICEKVLCTPPPKIKNGKHTFSEVEVFEYLDVITYSCDPAPGPDPF 200  
SLIGESTIYCGDNSVWSRAAPECKVVKCRFPVVENGKQISGFGKKFYKA 250  
TVMFECDKGFYLDGSDTIVCDSNSTWDPPVPKCLKVSTSSTTKSPASSAS 300  
GPRPTYKPPVSNYPGYPKPEEGILDSLDVWVIAVIVIAIVVGVAVICVVP 350  
YRYLQRRKKKGKADGGAHEYATYQTKSTTPAEQRG

Fig. 4B

SEQ. ID NO:6

1 tctgctttcc tccggagaaa taacagcgtc ttcgcgcccg cgcattggagc ctcccgcccg  
61 cgcgagtggt ccttttcctt cctggcgctt tcttggttg cttctggcgg ccatggtggt  
121 gctgctgtac tctttctcog atgcctgtga ggagccacca acatttgaag ctatggagct  
181 cattggtaaa ccaaaaccct actatgagat tgggtgaacga gtagattata agtgtaaaaa  
241 aggatacttc tatatacctc ctcttgccac ccatactatt tgtgatcgga atcatacatg  
301 gctacctgtc tcagatgacg cctgttatag agaaacatgt ccatatatac gggatccttt  
361 aaatggccaa gcagtcctctg caaatgggac ttacgagttt ggttatcaga tgcactttat  
421 ttgtaatgag ggttattact taattgggtga agaaattcta tattgtgaac tttaaaggatc  
481 agtagcaatt tggagcggta agccccaat atgtgaaaag gttttgtgta caccacctcc  
541 aaaaataaaa aatggaaaac acacctttag tgaagtagaa gtatttgagt atcttgatgc  
601 agtaacttat agttgtgatc ctgcacctgg accagatcca ttttacttta ttggagagag  
661 cacgatttat tgtggtgaca attcagtggt gagtcgtgct gctccagagt gtaaagtggg  
721 caaatgtcga tttccagtag tcgaaaatgg aaaacagata tcaggatttg gaaaaaatt  
781 ttactacaaa gcaacagtta tgtttgaatg cgataagggg ttttacctcg atggcagcga  
841 cacaattgtc tgtgacagta acagtacttg ggatccccca gttccaaagt gtcttaaagt  
901 gtcgacttct tccactacaa aatctccagc gtccagtgcc tcaggctcta ggctactta  
961 caagcctcca gtctcaaatt atccaggata tcctaaacct gaggaaggaa tacttgacag  
1021 tttggatggt tgggtcattg ctgtgattgt tattgccata gttgttggag ttgcagtaat  
1081 ttgtgttggt ccgtacagat atcttcaaag gaggaagaag aaagggaaag cagatggtgg  
1141 agctgaatat gccacttacc agactaaatc aaccactcca gcagagcaga gaggctgaat  
1201 agattccaca acctggtttg ccagttcatc ttttgactct attaaaatct tcaatagttg  
1261 ttattctgta gtttactct catgagtga actgtggctt agctaattt gcaatgtggc  
1321 ttgaatgtag gtagcatcct ttgatgcttc tttgaaactt gtatgaaatt gggatgaac  
1381 agattgcctg ctttccctta aataacactt agatttattg gaccagtcag cacagcatgc  
1441 ctggttgat taaagcaggg atatgctga ttttataaaa ttggcaaaat tagagaaata  
1501 tagttcacia tgaaattata ttttctttgt

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I G E S T I R C T S D P Q G N G V W S S  
P A P R C G I H H H H H H

Fig. 8A (Cont.)

Fig. 8B

SEQ. ID NO: 14

ATGACCGTCGCGCGGCCGAGCGTGCCCGCGGCGCTGCCC  
CTCCTCGGGGAGCTGCCCCGGCTGCTGCTGCTGGTGTGTTGTGCCTGCCGGCCGTGTGGGGT  
GACTGTGGCCTTCCCCCAGATGTACCTAATGCCCAGCCAGCTTTGGAAGGCCGTACAAGTTT  
CCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTTGTGAAAATTCCTGGCGAGAAG  
GACTCAGTGATCTGCCTTAAGGGCAGTCAATGGTCAGATATTGAAGAGTTCTGCAATCGTAGC  
TGCGAGGTGCCAACAAGGCTAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTAT  
TTTCCAGTCCGTAAGTGTGGAATATGAGTGCCGTCCAGGTTACAGAAGAGAACCTTCTCTA  
TCACCAAACTAACTTGCCTTCAGAATTTAAAATGGTCCACAGCAGTCGAATTTTGTAAAAAG  
AAATCATGCCCTAATCCGGGAGAAATACGAAATGGTCAGATTGATGTACCAGGTGGCATATTA  
TTTGGTGCAACCATCTCCTTCTCATGTAACACAGGGTACAAATTATTTGGCTCGACTTCTAGT  
TTTTGTCTTATTTTCAGGCAGCTCTGTCCAGTGGAGTGACCCGTTGCCAGAGTGACAGAGAAAT  
TATTGTCCAGCACCACCACAAATTGACAATGGAATAATTCAAGGGGAACGTGACCATTATGGA  
TATAGACAGTCTGTAACGTATGCATGTAATAAAGGATTCACCATGATTGGAGAGCACTCTATT  
TATTGTACTGTGAATAATGATGAAGGAGAGTGGAGTGGCCCACCACCTGAATGC  
TCGAGTCCTAACAAATGCACGCCTCCAAATGTGGAAAATGGAATATTGGTATCTGACAAC  
AGAAGCTTATTTTCCTTAAATGAAGTTGTGGAGTTTAGGTGTGAGCCTGGCTTTGTCTATG  
AAAGGACCCCGCCGTGTGAAGTGCCAGGCCCTGAACAAATGGGAGCCGGAGCTACCAAGC  
TGCTCCAGGGTATGTGAGCCACCTCCAGATGTCTGTCATGCTGAGCGTACCCAAAGGGAC  
AAGGACAACCTTTTACCTGGGCAGGAAGTGTCTACAGCTGTGAGCCCGGCTACGACCTC  
AGAGGGGCTGCGTCTATGCGCTGCACACCCAGGGAGACTGGAGCCCTGCAGCCCCCACA  
TGTGAAGTGAAATCCTGTGATGACTTCATGGGCCAACTTCTTAATGGCCGTGTGCTATTT  
CCAGTAAATCTCCAGCTTGGAGCAAAAGTGGATTTTGTGTTGTGATGAAGGATTTCAATTA  
AAAGGCAGCTCTGCTAGTTACTGTGCTTGGCTGGAATGGAAAGCCTTTGGAATAGCAGT  
GTTCCAGTGTGTGAACAAATCTTTTGTCCAAGTCCTCCAGTTATTCTTAATGGGAGACAC  
ACAGGAAAACCTCTGGAAGTCTTTCCCTTTGGAAAAGCAGTAAATTACACATGCGACCCC  
CACCCAGACAGAGGGACGAGCTTCGACCTCATTGGAGAGAGCACCATCCGCTGCACAAGT  
GACCCTCAAGGGAATGGGGTTTGGAGCAGCCCTGCCCTCGCTGTGGAATTCTGGGTAC  
TGTCAGCCCCAGATCATTTTCTGTTTGCCAAGTTGAAAACCCAAACCAATGCATCTGAC  
TTTCCCATTGGGACATCTTTAAAGTACGAATGCCGTCTGAGTACTACGGGAGGCCATT  
TCTATCACATGTCTAGATAACCTGGTCTGGTCAAGTCCCAAAGATGTCTGTAAACGTAAA  
TCATGTAAAACTCCTCCAGATCCAGTGAATGGCATGGTGCATGTGATCACAGACATCCAG  
GTTGGATCCAGAATCAACTATTCTTGTACTACAGGGCACCGACTCATTGGTCACTCATCT  
GCTGAATGTATCCTCTCGGGCAATGCTGCCCATTTGGAGCACGAAGCCGCAATTTGTCAA  
CGAATTCCTTGTGGGCTACCCCCACCATCGCCAATGGAGATTTTATTAGCACCAACAGA  
GAGAATTTTCACTATGGATCAGTGGTGACCTACCGCTGCAATCCTGGAAGCGGAGGGAGA  
AAGGTGTTTGAAGCTTGTGGGTGAGCCCTCCATATACTGCACCAGCAATGACGATCAAGTG  
GGCATCTGGAGCGGCCCCGGCCCCCTCAGTGCATTATACCTAACAAATGCACGCCTCCAAAT  
GTGGAAAATGGAATATTGGTATCTGACAACAGAAGCTTATTTTCCTTAAATGAAGTTGTG  
GAGTTTAGGTGTGAGCCTGGCTTTGTGTCATGAAAGGACCCCGCCGTGTGAAGTGCCAGGCC  
CTGAACAAATGGGAGCCGGAGCTACCAAGCTGCTCCAGGGTATGTGAGCCACCTCCAGAT  
GTCCTGCATGCTGAGCGTACCCAAAGGGACAAGGACAACCTTTTACCCGGGCAGGAAGTG  
TTCTACAGCTGTGAGCCCGGCTATGACCTCAGAGGGGCTGCGTCTATGCGCTGCACACCC  
CAGGGAGACTGGAGCCCTGCAGCCCCCACATGTGAAGTGAAATCCTGTGATGACTTCATG  
GGCCAACTTCTTAATGGCCGTGTGCTATTTCCAGTAAATCTCCAGCTTGGAGCAAAAGTG

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GATTTTGTGTGTGATGAAGGATTTCAATTAAAAGGCAGCTCTGCTAGTTATTGTGTCTTG  
GCTGGAATGGAAAGCCTTTGGAATAGCAGTGTTCAGTGTGTGAACAAATCTTTTGTCCA  
AGTCCTCCAGTTATTCCTAATGGGAGACACACAGGAAAACCTCTGGAAGTCTTTCCCTTT  
GGAAAAGCAGTAAATTACACATGCGACCCCCACCCAGACAGAGGGACGAGCTTCGACCTC  
ATTGGAGAGAGCACCATCCGCTGCACAAGTGACCCTCAAGGGAATGGGGTTTGGAGCAGC  
CCTGCCCCCTCGCTGTGGAATTCATCACCATCACCATCACTAAAGATCT

Fig. 8B (Cont.)

Fig. 9A

SEQ ID NO:15

	L	L	G	E	L	P	R	L	L	L	L	V	L	L	C	L	P	A	A	L	P	
D	C	G	L	P	P	D	V	P	N	A	Q	P	A	L	E	G	R	T	S	F		
P	E	D	T	V	I	T	Y	K	C	E	E	S	F	V	K	I	P	G	E	K		
D	S	V	I	C	L	K	G	S	Q	W	S	D	I	E	E	F	C	N	R	S		
C	E	V	P	T	R	L	N	S	A	S	L	K	Q	P	Y	I	T	Q	N	Y		
F	P	V	G	T	V	V	E	Y	E	C	R	P	G	Y	R	R	E	P	S	L		
S	P	K	L	T	C	L	Q	N	L	K	W	S	T	A	V	E	F	C	K	K		
K	S	C	P	N	P	G	E	I	R	N	G	Q	I	D	V	P	G	G	I	L		
F	G	A	T	I	S	F	S	C	N	T	G	Y	K	L	F	G	S	T	S	S		
F	C	L	I	S	G	S	S	V	Q	W	S	D	P	L	P	E	C	R	E	I		
Y	C	P	A	P	P	Q	I	D	N	G	I	I	Q	G	E	R	D	H	Y	G		
Y	R	Q	S	V	T	Y	A	C	N	K	G	F	T	M	I	G	E	H	S	I		
Y	C	T	V	N	N	D	E	G	E	W	S	G	P	P	P	E	C					
S	S	P	N	K	C	T	P	P	N	V	E	N	G	I	L	V	S	D	N			
R	S	L	F	S	L	N	E	V	V	E	F	R	C	Q	P	G	F	V	M			
K	G	P	R	R	V	K	C	Q	A	L	N	K	W	E	P	E	L	P	S			
C	S	R	V	C	Q	P	P	P	D	V	L	H	A	E	R	T	Q	R	D			
K	D	N	F	S	P	G	Q	E	V	F	Y	S	C	E	P	G	Y	D	L			
R	G	A	A	S	M	R	C	T	P	Q	G	D	W	S	P	A	A	P	T			
C	E	V	K	S	C	D	D	F	M	G	Q	L	L	N	G	R	V	L	F			
P	V	N	L	Q	L	G	A	K	V	D	F	V	C	D	E	G	F	Q	L			
K	G	S	S	A	S	Y	C	V	L	A	G	M	E	S	L	W	N	S	S			
V	P	V	C	E	Q	I	F	C	P	S	P	P	V	I	P	N	G	R	H			
T	G	K	P	L	E	V	F	P	F	G	K	A	V	N	Y	T	C	D	P			
H	P	D	R	G	T	S	F	D	L	I	G	E	S	T	I	R	C	T	S			
D	P	Q	G	N	G	V	W	S	S	P	A	P	R	C	G	I	L	G	H			
C	Q	A	P	D	H	F	L	F	A	K	L	K	T	Q	T	N	A	S	D			
F	P	I	G	T	S	L	K	Y	E	C	R	P	E	Y	Y	G	R	P	F			
S	I	T	C	L	D	N	L	V	W	S	S	P	K	D	V	C	K	R	K			
S	C	K	T	P	P	D	P	V	N	G	M	V	H	V	I	T	D	I	Q			
V	G	S	R	I	N	Y	S	C	T	T	G	H	R	L	I	G	H	S	S			
A	E	C	I	L	S	G	N	A	A	H	W	S	T	K	P	P	I	C	Q			
R	I	P	C	G	L	P	P	T	I	A	N	G	D	F	I	S	T	N	R			
E	N	F	H	Y	G	S	V	V	T	Y	R	C	N	P	G	S	G	G	R			
K	V	F	E	L	V	G	E	P	S	I	Y	C	T	S	N	D	D	Q	V			
G	I	W	S	G	P	A	P	Q	C	I	I	P	N	K	C	T	P	P	N			

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V E N G I L V S D N R S L F S L N E V V  
E F R C Q P G F V M K G P R R V K C Q A  
L N K W E P E L P S C S R V C Q P P P D  
V L H A E R T Q R D K D N F S P G Q E V  
F Y S C E P G Y D L R G A A S M R C T P  
Q G D W S P A A P T C E V K S C D D F M  
G Q L L N G R V L F P V N L Q L G A K V  
D F V C D E G F Q L K G S S A S Y C V L  
A G M E S L W N S S V P V C E Q I F C P  
S P P V I P N G R H T G K P L E V F P F  
G K A V N Y T C D P H P D R G T S F D L  
I G E S T I R C T S D P Q G N G V W S S  
P A P R C G I L G H C Q A P D H F L F A  
K L K T Q T N A S D F P I G T S L K Y E  
C R P E Y Y G R P F S I T C L D N L V W  
S S P K D V C K R K S C K T P P D P V N  
G M V H V I T D I Q V  
G S R I N Y S C T T G H R L I G H S S  
A E C I L S G N A A H W S T K P P I C Q  
R I P C G L P P T I A N G D F I S T N R  
E N F H Y G S V V T Y R C N P G S G G R  
K V F E L V G E P S I Y C T S N D D Q V  
G I W S G P A P Q C I I P N K C T P P N  
V E N G I L V S D N R S L F S L N E V V  
E F R C Q P G F V M K G P R R V K C Q A  
L N K W E P E L P S C S R V C Q P P P D  
V L H A E R T Q R D K D N F S P G Q E V  
F Y S C E P G Y D L R G A A S M R C T P  
Q G D W S P A A P T C E V K S C D D F M  
G Q L L N G R V L F P V N L Q L G A K V  
D F V C D E G F Q L K G S S A S Y C V L  
A G M E S L W N S S V P V C E Q I F C P  
S P P V I P N G R H T G K P L E V F P F  
G K A V N Y T C D P H P D R G T S F D L  
I G E S T I R C T S D P Q G N G V W S S  
P A P R C G I H H H H H H

Fig. 9A (Cont.)

Fig 9B

SEQ. ID NO:16

ATGACCGTCGCGCGGCCGAGCGTGCCCGCGGCGCTGCCC  
CTCCTCGGGGAGCTGCCCCGGCTGCTGCTGCTGGTGCTGTTGTGCTGCGGCCGCTGTGGGGT  
GACTGTGGCCTTCCCCAGATGTACCTAATGCCAGCCAGCTTTTGAAGGCCGTACAAGTTTT  
CCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTTGTGAAAATTCTGGCGAGAAG  
GACTCAGTGATCTGCCTTAAGGGCAGTCAATGGTCAGATATTGAAGAGTTCTGCAATCGTAGC  
TGCGAGGTGCCAACAAGGCTAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTAT  
TTTCCAGTCGGTACTGTTGTGGAATATGAGTGCCGTCCAGGTTACAGAAGAGAACCTTCTCTA

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Inventor: M. Edward Medof

TCACCAAACTAACTTGCCTTCAGAATTTAAATGGTCCACAGCAGTCGAATTTTGTAAAAAC  
AAATCATGCCCTAATCCGGGAGAAATACGAAATGGTCAGATTGATGTACCAGGTGGCATATTA  
TTTGGTGCAACCATCTCCTTCTCATGTAACACAGGGTACAAATTATTTGGCTCGACTTCTAGT  
TTTTGTCTTATTTTCAGGCAGCTCTGTCCAGTGGAGTGACCCGTTGCCAGAGTGCAGAGAAATT  
TATTGTCCAGCACCACCACAAATTGACAATGGAATAATTCAAGGGGAACGTGACCATTATGGA  
TATAGACAGTCTGTAACTGATGCATGTAATAAAGGATTACCCATGATTGGAGAGCACTCTATT  
TATTGTACTGTGAATAATGATGAAGGAGAGTGGAGTGGCCCACCACCTGAATGC  
TCGAGTCTTAACAAATGCACGCCTCCAAATGTGGAAAATGGAATATTGGTATCTGACAAC  
AGAAGCTTATTTTCTTAAATGAAGTTGTGGAGTTTAGGTGTCAGCCTGGCTTTGTTCATG  
AAAGGACCCCGCCGTGTGAAGTGCCAGGCCCTGAACAAATGGGAGCCGGAGCTACCAAGC  
TGCTCCAGGGTATGTCAGCCACCTCCAGATGTCCTGCATGCTGAGCGTACCCAAAGGGAC  
AAGGACAACTTTTTCACCTGGGCAGGAAGTGTCTACAGCTGTGAGCCCGGCTACGACCTC  
AGAGGGGCTGCGTCTATGCGCTGCACACCCAGGGAGACTGGAGCCCTGCAGCCCCACA  
TGTGAAGTGAAATCCTGTGATGACTTCATGGGCCAACTTCTTAATGGCCGTGTGCTATTT  
CCAGTAAATCTCCAGCTTGGAGCAAAAGTGGATTTTGTGTTGTGATGAAGGATTTCAATTA  
AAAGGCAGCTCTGCTAGTTACTGTGTCTTGGCTGGAATGGAAAGCCTTTGGAATAGCAGT  
GTTCCAGTGTGTGAACAAATCTTTTGTCCAAGTCTCCAGTTATTCTAATGGGAGACAC  
ACAGGAAAACCTCTGGAAGTCTTTCCCTTTGGAAAAGCAGTAAATTACACATGCGACCCC  
CACCCAGACAGAGGGACGAGCTTCGACCTCATTGGAGAGAGCACCATCCGCTGCACAAGT  
GACCCTCAAGGGAATGGGGTTTGGAGCAGCCCTGCCCCCTCGCTGTGGAATTCTGGGTAC  
TGTCAAGCCCCAGATCATTTTCTGTTTGCCAAGTTGAAAACCCAAACCAATGCATCTGAC  
TTTCCCATTTGGGACATCTTTAAAGTACGAATGCCGTCCTGAGTACTACGGGAGGCCATT  
TCTATCACATGTCTAGATAACCTGGTCTGGTCAAGTCCCAAAGATGTCTGTAAACGTAA  
TCATGTAAACTCCTCCAGATCCAGTGAATGGCATGGTGCATGTGATCACAGACATCCAG  
GTTGGATCCAGAATCAACTATTCTTGTACTACAGGGCACCGACTCATTGGTCACTCATCT  
GCTGAATGTATCCTCTCGGGCAATGCTGCCCATTTGGAGCACGAAGCCGCCAATTTGTCAA  
CGAATTCCTTGTGGGCTACCCCCACCATCGCCAATGGAGATTTTATTAGCACCAACAGA  
GAGAATTTTCACTATGGATCAGTGGTGACCTACCGCTGCAATCCTGGAAGCGGAGGGAGA  
AAGGTGTTTGTAGCTTGTGGGTGAGCCCTCCATATACTGCACCAGCAATGACGATCAAGTG  
GGCATCTGGAGCGGCCCGGCCCTCAGTGCAATTATACCTAACAAATGCACGCCTCCAAAT  
GTGGAAAATGGAATATTGGTATCTGACAACAGAAGCTTATTTTCTTAAATGAAGTTGTG  
GAGTTTAGGTGTCAGCCTGGCTTTGTTCATGAAAGGACCCCGCCGTGTGAAGTGCCAGGCC  
CTGAACAAATGGGAGCCGGAGCTACCAAGCTGCTCCAGGGTATGTGAGCCACCTCCAGAT  
GTCCTGCATGCTGAGCGTACCCAAAGGGACAAGGACAACTTTTCACCCGGGCAGGAAGTG  
TTCTACAGCTGTGAGCCCGGCTATGACCTCAGAGGGGCTGCGTCTATGCGCTGCACACCC  
CAGGGAGACTGGAGCCCTGCAGCCCCCACATGTGAAGTGAAATCCTGTGATGACTTCATG  
GGCCAACTTCTTAATGGCCGTGTGCTATTTCCAGTAAATCTCCAGCTTGGAGCAAAAGTG  
GATTTTGTGTTGTGATGAAGGATTTCAATTAAGGAGCAGCTCTGCTAGTTATTGTGTCTTG  
GCTGGAATGGAAGCCTTTGGAATAGCAGTGTTCCAGTGTGTGAACAAATCTTTGTCCA  
AGTCTCCAGTTATTCTAATGGGAGACACACAGGAAAACCTCTGGAAGTCTTTCCCTTT  
GGAAAAGCAGTAAATTACACATGCGACCCCCACCCAGACAGAGGGACGAGCTTCGACCTC  
ATTGGAGAGAGCACCATCCGCTGCACAAGTGACCCTCAAGGGAATGGGGTTTGGAGCAGC  
CCTGCCCCCTCGCTGTGGAATTCTGGGTCACTGTCAAGCCCCAGATCATTTTCTGTTTGCC  
AAGTTGAAAACCCAAACCAATGCATCTGACTTTCCCATTTGGGACATCTTTAAAGTACGAA  
TGCCGTCCTGAGTACTACGGGAGGCCATTCTCTATCACATGTCTAGATAACCTGGTCTGG  
TCAAGTCCCAAAGATGTCTGTAAACGTAAATCATGTAAAACCTCCTCCAGATCCAGTGAAT  
GGCATGGTGCATGTGATCACAGACATCCAGTT

GGATCCAGAATCAACTATTCTTGTACTACAGGGCACCGACTCATTGGTCACTCATCT  
GCTGAATGTATCCTCTCGGGCAATGCTGCCCATTTGGAGCACGAAGCCGCCAATTTGTCAA  
CGAATTCCTTGTGGGCTACCCCCACCATCGCCAATGGAGATTTTATTAGCACCAACAGA  
GAGAATTTTCACTATGGATCAGTGGTGACCTACCGCTGCAATCCTGGAAGCGGAGGGAGA

Fig. 9B (Cont.)

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R S L F S L N E V V E F R C Q P G F V M  
K G P R R V K C Q A L N K W E P E L P S  
C S R V C Q P P P D V L H A E R T Q R D  
K D N F S P G Q E V F Y S C E P G Y D L  
R G A A S M R C T P Q G D W S P A A P T  
C E V K S C D D F M G Q L L N G R V L F  
P V N L Q L G A K V D F V C D E G F Q L  
K G S S A S Y C V L A G M E S L W N S S  
V P V C E Q I F C P S P P V I P N G R H  
T G K P L E V F P F G K A V N Y T C D P  
H P D R G T S F D L I G E S T I R C T S  
D P Q G N G V W S S P A P R C G I L  
V E S K Y G P P C P S C P A P E F L  
G G P S V F L F P P K P K D T L M I S R  
T P E V T C V V V D V S Q E D P E V Q F  
N W Y V D G V E V H N A K T K P R E E Q  
F N S T Y R V V S V L T V L H Q D W L N  
G K E Y K C K V S N K G L P S S I E K T  
I S K A K G Q P R E P Q V Y T L P P S Q  
E E M T K N Q V S L T C L V K G F Y P S  
D I A V E W E S N G Q P E D N Y K T T P  
P V L D S D G S F F L Y S R L T V D K S  
R W Q E G N V F S C S V M H E A L H N H  
Y T Q K S L S L S P G K

Fig. 11A (Cont.)

Fig. 11B

SEQ. ID NO:20

ATGACCGTCGCGCGGCCGAGCGTGCCCGCGGCGCTGCCC  
CTCCTCGGGGAGCTGCCCCGGCTGCTGCTGCTGGTGCTGTTGTGCCTGCCGGCCGTGTGGGGT  
GACTGTGGCCTTCCCCCAGATGTACCTAATGCCCAGCCAGCTTTGGAAGGCCGTACAAGTTTT  
CCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTTGTGAAAATTCCTGGCGAGAAG  
GACTCAGTGATCTGCCTTAAGGGCAGTCAATGGTCAGATATTGAAGAGTTCTGCAATCGTAGC  
TGCGAGGTGCCAACAAGGCTAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTAT  
TTTCCAGTTCGGTACTGTTGTGGAATATGAGTGCCGTCCAGGTTACAGAAGAGAACCTTCTCTA  
TCACCAAACTAAGTTCAGAAATTTAAAATGGTCCACAGCAGTCGAATTTTGTA AAAAAG  
AAATCATGCCCTAATCCGGGAGAAATACGAAATGGTCAGATTGATGTACCAGGTGGCATATTA  
TTTGGTGCAACCATCTCCTTCTCATGTAACACAGGGTACAAATTATTTGGCTCGACTTCTAGT  
TTTTGTCTTATTTAGGCAGCTCTGTCCAGTGGAGTGACCCGTTGCCAGAGTGCAGAGAAATT  
TATTGTCCAGCACCACCACAAATTGACAAATGGAATAATTCAAGGGGAACGTGACCATTATGGA  
TATAGACAGTCTGTAACGTATGCATGTAATAAAGGATTACCATGATTGGAGAGCACTCTATT  
TATTGTACTGTGAATAATGATGAAGGAGAGTGGAGTGGCCCACCACCTGAATGC  
TCGAGTCTTAACAAATGCACGCCTCCAAATGTGGAAAATGGAATATTGGTATCTGACAAC  
AGAAGCTTATTTTCCTTAAATGAAGTTGTGGAGTTTAGGTGTCAGCCTGGCCTTTGTCA TG  
AAAGGACCCCGCGTGTGAAGTGCCAGGCCCTGAACAAATGGGAGCCGGAGCTACCAAGC  
TGCTCCAGGGTATGTCAGCCACCTCCAGATGTCCTGCATGCTGAGCGTACCCAAAGGGAC  
AAGGACAACTTTTCACCTGGGCAGGAAGTGTCTACAGCTGTGAGCCCGGCTACGACCTC

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Inventor: M. Edward Medof

AGAGGGGCTGCGTCTATGCGCTGCACACCCCAGGGAGACTGGAGCCCTGCAGCCCCCACA  
TGTGAAGTGAAATCCTGTGATGACTTCATGGGCCAACTTCTTAATGGCCGTGTGCTATTT  
CCAGTAAATCTCCAGCTTGGAGCAAAAGTGGATTTTGTGTTGTGATGAAGGATTTCAATTA  
AAAGGCAGCTCTGCTAGTTACTGTGTCTTGGCTGGAATGGAAAGCCTTTGGAATAGCAGT  
GTTCCAGTGTGTGAACAAATCTTTGTCCAAGTCCTCCAGTTATTCCTAATGGGAGACAC  
ACAGGAAAACCTCTGGAAGTCTTTCCCTTTGGAAAAGCAGTAAATTACACATGCGACCCC  
CACCCAGACAGAGGGACGAGCTTCGACCTCATTTGGAGAGAGCACCATCCGCTGCACAAGT  
GACCCCTCAAGGGAATGGGGTTTGGAGCAGCCCTGCCCCCTCGCTGTGGAATTCTG  
GTTGAGTCCAAATATGGTCCCCCATGCCCATCATGCCCAGCACCTGAGTTCCTG  
GGGGGACCATCAGTCTTCTGTTCCTTCCCCCAAAACCCAAGGACACTCTCATGATCTCCCGG  
ACCCCTGAGGTACAGTGCCTGGTGGTGGACGTGAGCCAGGAAGACCCCGAGGTCCAGTTC  
AACTGGTACGTGGATGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAG  
TTCAACAGCACGTACCGTGTGGTCAGCGTCTCACCCTCCTGCACCAGGACTGGCTGAAC  
GGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGGCCTCCCGTCTCCTCATCGAGAAAACC  
ATCTCCAAAGCCAAAGGGCAGCCCCGAGAGCCACAGGTGTACACCCTGCCCCCATCCCAG  
GAGGAGATGACCAAGAACCAGGTGAGCCTGACCTGCCTGGTCAAAGGCTTCTACCCCAGC  
GACATCGCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGGACAACCTACAAGACCACGCCCT  
CCCGTGTCTGGACTCCGACGGCTCCTTCTTCTCTACAGCAGGCTAACCCTGGACAAGAGC  
AGGTGGCAGGAGGGGAATGTCTTCTCATGCTCCGTGATGCATGAGGCTCTGCACAACCAC  
TACACACAGAAGAGCCTCTCCCTGTCTCCGGGTAAATGATAAAGATCT

Fig. 11B (Cont.)

Fig. 12A

SEQ. ID NO:21

ATA TAC GAA TTC TGG GTC ACT GTG AGG AGC CAC CAA CAT TTG AAG C

Fig. 12B

SEQ. ID NO:22

ACA GTG AGA TCT TTA GTG ATG GTG ATG GTG ATG CGA CAC TTT AAG ACA CTT  
TGG AAC

Fig. 13A

SEQ. ID NO:23

M	T	V	A	R	P	S	V	P	A	A	L	P								
L	L	G	E	L	P	R	L	L	L	L	V	L	L	C	L	P	A	V	W	G
D	C	G	L	P	P	D	V	P	N	A	Q	P	A	L	E	G	R	T	S	F
P	E	D	T	V	I	T	Y	K	C	E	E	S	F	V	K	I	P	G	E	K
D	S	V	I	C	L	K	G	S	Q	W	S	D	I	E	E	F	C	N	R	S
C	E	V	P	T	R	L	N	S	A	S	L	K	Q	P	Y	I	T	Q	N	Y
F	P	V	G	T	V	V	E	Y	E	C	R	P	G	Y	R	R	E	P	S	L
S	P	K	L	T	C	L	Q	N	L	K	W	S	T	A	V	E	F	C	K	K
K	S	C	P	N	P	G	E	I	R	N	G	Q	I	D	V	P	G	G	I	L
F	G	A	T	I	S	F	S	C	N	T	G	Y	K	L	F	G	S	T	S	S
F	C	L	I	S	G	S	S	V	Q	W	S	D	P	L	P	E	C	R	E	I



Replacement Sheet  
Serial No. 10/597,373  
Inventor: M. Edward Medof

Y C P A P P Q I D N G I I Q G E R D H Y G  
Y R Q S V T Y A C N K G F T M I G E H S I  
Y C T V N N D E G E W S G P P P E C  
S S P N K C T P P N V E N G I L V S D N  
R S L F S L N E V V E F R C Q P G F V M  
K G P R R V K C Q A L N K W E P E L P S  
C S R V C Q P P P D V L H A E R T Q R D  
K D N F S P G Q E V F Y S C E P G Y D L  
R G A A S M R C T P Q G D W S P A A P T  
C E V K S C D D F M G Q L L N G R V L F  
P V N L Q L G A K V D F V C D E G F Q L  
K G S S A S Y C V L A G M E S L W N S S  
V P V C E Q I F C P S P P V I P N G R H  
T G K P L E V F P F G K A V N Y T C D P  
H P D R G T S F D L I G E S T I R C T S  
D P Q G N G V W S S P A P R C G I L G H  
C E E P P T F E A M E L I G K P K P Y Y  
E I G E R V D Y K C K K G Y F Y I P P L  
A T H T I C D R N H T W L P V S D D A C  
Y R E T C P Y I R D P L N G Q A V P A N  
G T Y E F G Y Q M H F I C N E G Y Y L I  
G E E I L Y C E L K G S V A I W S G K P  
P I C E K V L C T P P P K I K N G K H T  
F S E V E V F E Y L D A V T Y S C D P A  
P G P D P F S L I G E S T I Y C G D N S  
V W S R A A P E C K V V K C R F P V V E  
N G K Q I S G F G K K F Y Y K A T V M F  
E C D K G F Y L D G S D T I V C D S N S  
T W D P P V P K C L K V S H H H H H H

Fig. 13A (Cont.)

Fig. 13B

SEQ. ID NO:24

ATGACCGTCGCGCGGCCGAGCGTGCCCGCGGCGCTGCCC  
CTCCTCGGGGAGCTGCCCCGGCTGCTGCTGCTGGTGTGTTGTGCTGCGGCCGTGTGGGGT  
GACTGTGGCCTTCCCCCAGATGTACCTAATGCCAGCCAGCTTTGGAAGGCCGTACAAGTTTT  
CCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTTGTGAAAATTCTGGCGAGAAG  
GACTCAGTGATCTGCCTTAAGGGCAGTCAATGGTCAGATATTGAAGAGTTCTGCAATCGTAGC  
TGCGAGGTGCCAACAAGGCTAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTAT  
TTTCCAGTCGGTACTGTTGTGGAATATGAGTGCCGTCCAGGTTACAGAAGAGAACCCTTCTCTA  
TCACCAAACTAATTGCCTTCAGAATTTAAAATGGTCCACAGCAGTCGAATTTTGTAAAAAG  
AAATCATGCCCTAATCCGGGAGAAATACGAAATGGTCAGATTGATGTACCAGGTGGCATATTA  
TTTGGTGCAACCATCTCCTTCTCATGTAACACAGGGTACAAATTATTTGGCTCGACTTCTAGT  
TTTTGTCTTATTTTCAGGCAGCTCTGTCCAGTGGAGTGACCCGTTGCCAGAGTGCAGAGAAAT  
TATTGTCCAGCACCACCACAAATTGACAATGGAATAATTCAAGGGGAACGTGACCATTATGGA  
TATAGACAGTCTGTAACGTATGCATGTAATAAAGGATTCAACCATGATTGGAGAGCACTCTATT  
TATTGTACTGTGAATAATGATGAAGGAGAGTGGAGTGGCCCAACACCTGAATGC  
TCGAGTCCTAACAAATGCACGCCTCCAAATGTGGAAAATGGAATATTGGTATCTGACAAC  
AGAAGCTTATTTTCCTTAAATGAAGTTGTGGAGTTTAGGTGTGAGCCTGGCTTTGTCATG

AAAGGACCCCGCCGTGTGAAGTGCCAGGCCCTGAACAAATGGGAGCCGGAGCTACCAAGC  
TGCTCCAGGGTATGTCAGCCACCTCCAGATGTCCTGCATGCTGAGCGTACCCAAAGGGAC  
AAGGACAACTTTTCACCTGGGCAGGAAGTGTTCTACAGCTGTGAGCCCGGCTACGACCTC  
AGAGGGGCTGCGTCTATGCGCTGCACACCCAGGGAGACTGGAGCCCTGCAGCCCCCACA  
TGTGAAGTGAAATCCTGTGATGACTTCATGGGCCAACTTCTTAATGGCCGTGTGCTATTT  
CCAGTAAATCTCCAGCTTGGAGCAAAAGTGGATTTTGTGTGTGATGAAGGATTTCAATTA  
AAAGGCAGCTCTGCTAGTTACTGTGTCTTGGCTGGAATGGAAAGCCTTTGGAATAGCAGT  
GTTCCAGTGTGTGAACAAATCTTTTGTCCAAGTCCTCCAGTTATTCCTAATGGGAGACAC  
ACAGGAAAACCTCTGGAAGTCTTCCCTTTGGAAAAGCAGTAAATTACACATGCGACCCC  
CACCCAGACAGAGGGACGAGCTTCGACCTCATTTGGAGAGAGCACCATCCGCTGCACAAGT  
GACCCTCAAGGGAATGGGGTTTGGAGCAGCCCTGCCCCCTCGCTGTGGAATTCTGGGTCAC  
TGTGAGGAGCCACCAACATTTGAAGCTATGGAGCTCATTTGGTAAACCAAACCCCTACTAT  
GAGATTGGTGAACGAGTAGATTATAAGTGTAAGGATACTTCTATATACCTCCTCTT  
GCCACCCATACTATTTGTGATCGGAATCATAATGGCTACCTGTCTCAGATGACGCCTGT  
TATAGAGAAACATGTCCATATATACGGGATCCTTTAAATGGCCAAGCAGTCCCTGCAAAT  
GGGACTTACGAGTTTGGTTATCAGATGCACTTTATTTGTAATGAGGGTTATTACTTAATT  
GGTGAAGAAATTCTATATTGTGAACCTTAAAGGATCAGTAGCAATTTGGAGCGGTAAAGCCC  
CCAATATGTGAAAAGGTTTTGTGTACACCACCTCCAAAAATAAAAAATGGAAAACACACC  
TTTAGTGAAGTAGAAGTATTTGAGTATCTTGATGCAGTAACTTATAGTTGTGATCCTGCA  
CCTGGACCAGATCCATTTTCACTTATTGGAGAGAGCACGATTTATTGTGGTGACAATTCA  
GTGTGGAGTCGTGCTGCTCCAGAGTGTAAGTGGTCAAATGTGATTTCCAGTAGTCGAA  
AATGGAAAACAGATATCAGGATTTGGAAAAAATTTTACTACAAAGCAACAGTTATGTTT  
GAATGCGATAAGGGTTTTTACCTCGATGGCAGCGACACAATTGTCTGTGACAGTAACAGT  
ACTTGGGATCCCCCAGTTCCAAAGTGTCTTAAA//GTGTCG//CATCACCATCACCATCAC  
TAAAGATCT

Fig. 13B (Cont.)